

Cotting (Benj E.)

Statistical Association

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DISEASE;—A PART OF THE PLAN OF CREATION.

THE

ANNUAL DISCOURSE

BEFORE THE

MASSACHUSETTS MEDICAL SOCIETY,

MAY 31st, 1865.

BY BENJAMIN E. COTTING, M.D.

"A mighty maze! but not without a Plan."



BOSTON:

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New York City

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At an Adjourned Meeting of the Mass. Medical Society, held Oct. 3, 1860, it was

Resolved, "That the Massachusetts Medical Society hereby declares that it does not consider itself as having endorsed or censured the opinions in former published Annual Discourses, nor will it hold itself responsible for any opinions or sentiments advanced in any future similar discourses."

Resolved, "That the Committee on Publication be directed to print a statement to that effect at the commencement of each Annual Discourse which may hereafter be published."

DISEASE; — A PART OF THE PLAN OF CREATION.

MR. PRESIDENT, AND FELLOWS

OF THE MASSACHUSETTS MEDICAL SOCIETY :

THE profession we follow is capable alike of the divinest endeavor and the meanest purpose. To save it from degradation, and to elevate it to its true position as one of the noblest of human vocations, its faithful votaries have labored with untiring energy in past times and in our own, down to the present hour.

To understand disease, and to "cure" it, are the great objects and the laudable aspirations of the Medical Profession. The former is difficult; the latter often impossible. Notwithstanding the advanced state of medical science, numbers are at all times prostrate by sickness, and most of the race die prematurely. So uncertain are the effects of dis-

eases, and so disastrous often their termination, that even the simplest attack may become a source of personal anxiety and alarm. Such too are the sympathies of our nature, and so constantly are they thus called into action, that experienced attendants upon the sick frequently grasp blindly and fortuitously at a multitude of nominal or heterogeneous appliances which have obtained the name of remedies, in the hope that some one of the number may perchance relieve or rescue the sufferer. In this way physicians themselves, even the more eminent, are imperceptibly and almost inevitably brought to the practical belief, that in the officious administration of drugs sanctioned by custom or prevailing prejudice — the superintending “a course of treatment,” as it is called — lies the chief end and aim of their calling. So thoroughly at last does this idea permeate the very life and thought of daily routine of our profession, that the mere suggestion of a more comprehensive and a more scientific view, or a more rational motive, if suspected of any accompanying distrust in popular or fashionable professional measures, is liable to be frowned upon as heresy. And thus it happens, that in every generation the struggle must be renewed to re-establish principles, and to arrest the mechanical, downward or trade-like tendency of our art ; and good men and true are called upon, and must be willing to go to the front and bear the brunt of the battle.

Grand forward movements in behalf of medical truth have been made in various directions in our own time, and with varied success ; but it is well known

to the members of this Society, that the great victory of the present century was achieved in this place just thirty years ago. Carefully and irresistibly the first advances were then made, and the first positions gained, until at length the whole argument was carried home and the stronghold impreguably secured. From henceforth, wherever the English language is spoken or read, the doctrine of self-limitation* will be a ruling influence in the profession until a new era shall require a further advance, or science demand another expression.

Thrown out as a "picket" on this occasion, I will essay my little skirmish and return as speedily as possible to the main column, fortunate if the solitary shot bring down a single resisting error; more fortunate if it serve to open on any point a clearer view for the progress of the advancing hosts.

"Who did sin, this man, or his parents?" is a question daily asked, in one form or another, at the bedside of the sick. The frequent response, as well as the query, presupposes, in general, that disease is undoubtedly referable to some indiscretion on the

* In the discourse on Self-Limited Diseases," delivered before this Society at their Annual Meeting in May, 1835, by Jacob Bigelow, M.D., the author gives the following definition.

"By a self-limited disease, I would be understood to express one which receives limits from its own nature, and not from foreign influences; one which, after it has obtained foothold in the system, cannot in the present state of our knowledge be eradicated or abridged by art, — but to which there is due a certain succession of processes, to be completed in a certain time, which time and processes may vary with the constitution and condition of the patient, and may tend to death or to recovery, but are not known to be shortened or greatly changed by medical treatment."

part of the sufferer, to the errors of his progenitors, or, at least, to that

“First disobedience, and the fruit
Of that forbidden tree, whose mortal taste
Brought death into the world and all our woe.”

To show the fallacy involved in this question, and that the original answer was the true one — to show that disease is not an accident merely in the history of our race, due only to unwarrantable experiments with our powers of endurance, but rather, that DISEASE IS A PART OF THE PLAN OF CREATION — one of the myriad expressions of Divine thought — will form a leading object of the present discourse.

Modern geology has brought to light many wonders of the past. It has revealed to us unmistakable evidences of the existence on the earth of numerous classes of organized beings, long ages before the appearance of the human race. Animals then lived, flourished, and passed away. Individuals, then as now, had a limited existence, which death terminated. Some whole tribes, then as now, were so constituted that they could live only by the destruction of others. For this purpose they were provided with organs for seizing, tearing, and devouring their prey ; while in some instances they seem to have been armed not only to destroy but to torture their victims. On the other hand, organs of defence were furnished to those in danger of assault, and means of escape given to the weak. So that it is evident that the same strife prevailed in those early periods of the world's history as in the present times. In short, there were

voracious mammalia before man, but voracious reptiles before mammalia, and voracious fishes before reptiles. Moreover, much curious information has been acquired with regard to the structure and functions of the internal organs of these extinct animals. Not only has the nature of their food been ascertained by the half-digested remains of other animals found within some of these creatures, but the size and structure of the digestive organs themselves, their vascular surface, and the mucous membrane which lined them, have also been made evident by unequivocal marks on the surfaces of their contents. While from these and other appearances found in such fossil remains, the inference is unavoidable that these creatures must have been liable to functional disorders of the abdominal organs similar to those affecting animals of analogous structure at the present day.

As clear as these indications are of the nature and habits of these remote animals, and their consequent liability to derangement of function, the proofs of their liability to organic or structural diseases are complete and unassailable. Extensive enlargements by ossific inflammation have been discovered; as also cavities and outgrowths produced by abscesses. Specimens of caries and necrosis are not infrequent. Other marks of scrofuloid diseases are also recorded. Instances of ankylosis have been noticed; and reunion of fractured bones, with exostosis at the points of junction, have been described and figured. And more than this, evidences have been found of recovery from the most extensive lacerations involving

bony structures, by the fangs of other animals, where the individual must have lived long enough afterward to allow the injuries to be repaired, as far as is ever possible after great loss of substance.

All these things we have most clearly demonstrated to us in addition to the necessary lethific action of physical causes, burning, freezing, suffocation, storms, natural poisons and the like, which also have existed through all time.

Thus it is evident that, from the beginning (using here the word in its widest geological meaning, and not simply in the narrow sense of the beginning of human existence), life has been subject to dangers, disorders and diseases, such as beset it in these latter days ; and that it ever had essentially the same means of escape and modes of recovery. So that we are led to the inevitable conclusion, that as the existence and peculiar structures of these ancient animals afford proofs of design, generally acknowledged* to be most wonderful and convincing, so also their processes of recovery from disease and accident, no art having intervened, must be accepted as equally the result of intelligent contrivance.

In like manner animals now living, whether species continued from former ages, or those introduced

* We are aware that the idea of a "Great Artificer" is considered a "fetishistic conception," unworthy an educated man or an enlightened age, by some philosophers, who find an easy solution of all phenomena of Creation in "Persistence of Force," spontaneously generated, acting upon matter itself uncreatable. According to this theory all evils are incidental, to be self-eliminated at some future period. Till a nearer approach of that good time coming, our manner of dealing with the subject may be permitted, leaving the facts presented to be translated into other language, should any one ever think it worth while.

since the appearance of man, all are liable to disease and bodily infirmities. Though preying upon each other, the numbers thus destroyed probably bear but a limited proportion to those swept away by casual pestilence. Singly and silently, however, the many, when overtaken by disease, withdraw to some obscure and sheltered nook to await their fate — of recovery or death. If health return, they crawl out by degrees to the warmth of day ; and many an awkward sportsman may have rejoiced over captures due less to his own skill than to the weakness of the convalescing victim. Usually such cases are isolated ; and each loss, like that of a falling leaf, is unnoticed and unmissed. Occasionally an epidemic rages, and the destruction becomes excessive ; while at times, “ diseases of mysterious origin break out in the animal kingdom, and well nigh exterminate the tribes on which they fall.”

As it is with wild, so it is with domestic animals. Diseases seize upon them in obedience to laws of which as yet little or nothing is known. Ordinarily they succumb, one by one, unnoticed except by their owners, or the scavenger and drayman. Now and then, however, the fold is infected, and its future hope endangered. Then the alarm spreads, and the whole country is aroused. In its ignorance and terror it sacrifices life without mercy, and treasure without discretion.

It were well for communities in general to give such subjects more careful study ; and especially so for physicians, since “ there is every reason,” says an eminent authority, “ for believing that pathology

in man would be greatly benefited by investigations of the diseases of animals."

And so it appears that disease is not only a part of the constant experience of animals, which could not have had any agency in the matter, and only submitted to the conditions imposed upon them, but that it obtained in the earliest indications of organized existence, and has continued uninterruptedly to the present time. No "mortal taste," but the will of the Creator determined and fashioned such a system of diseases — the evidences of which, foreshadowed in the beginning, become more and more apparent in the subsequent phases of Creation.

Turning now to the human family, whatever may have been its original condition, we find the "lapsed race" from the first pair, brought under the same general scheme. In no period of his life is man exempt from the incursions of disease, from infancy which wakes into an exanthem, to old age which sleeps "sans everything." Every organ has its peculiar diseases, every system of the body its own affections. No forecast or wisdom of the individual can with absolute certainty ward off or delay their attacks. To such an extent is this recognized, that the young adult who has passed through the so-called diseases of childhood is considered by statisticians of greater merchantable or insurable value, than one who has still to incur such dangers. Theories have been abundant to show how single diseases may be avoided; but it does not appear that any disease has as yet been removed from off the globe through man's agency. Flight to the mountains, or

to the uttermost parts of the earth, can at no period of life insure perfect exemption, and always at last proves unavailing. We know not even the secondary causes by which diseases are propagated, be they atmospheric, miasmatic, or animalcular. They have existed from the beginning, and, so far as we can at present divine, they will continue to exist through all time to come, or until they reach the termination assigned to them. So little are these causes understood, that in the usual incursion, spread and progress of the common diseases of successive years, not even the wind, that bloweth where it listeth, is less under the guidance or control of human agency or power. Though in all probability obedient to some general law, too subtle to be apprehended as yet, we are utterly unable to predict with certainty what even a day may bring forth of any disease in progress. When an epidemic appears, it often completely confounds all our conceptions of hygienic laws, as well as our preconceived notions of its nature or proper treatment. We cannot tell why it came, or when it will depart; or whether, under similar circumstances, it will again return. It marches on, often apparently without discrimination, over reputedly healthy districts; seizes on purified places, avoids the polluted, attacks the rich as well as the poor; subverting the theories of the learned and the predictions of the wise. Now and then we proclaim preventives, destined only to fail as the announcement escapes our lips. As we cannot bind the sweet influences of Pleiades, nor loose the bands of Orion, neither can we arrest the midnight pesti-

lence nor the noonday destruction; much less control in any degree the approach or violence of those terrific scourges which, in their appointed times and preordained courses, sweep over the nations, obeying Him only who rides upon the whirlwind and directs the storm.

Let us take a single case of disease, and observe what evidences of Design are exhibited in its regular series of phenomena and modifications. For example, let us take one of the simplest exanthems. It is unnecessary to particularize the minuter symptoms. It will be sufficient to notice its general history. For ten or fifteen days, more or less, after exposure to the morbid cause, called the period of incubation, the individual, though unaware of his condition, is as completely under the influence of the disease as at any subsequent period of its progress. As this stage closes, that of fever sets in, perhaps with some considerable degree of severity. Then, in two or three days, an eruption appears, beginning on the face and neck. On the next, or fifth day, it covers the body and extends to the extremities. On the sixth it begins to decline on the parts first affected, whilst it is vivid on the general surface. On the seventh, eighth and ninth, the eruption fades, in the order in which it came on, leaving the cuticle in a state of exfoliation.

Such is the history of one of the most common exanthems. Others of the class are not unlike it, in their general onset, progress and termination. No evidence of an intelligent contrivance can more distinctly indicate a plan, than that furnished by any

of these diseases. In the invasion, incubation, progress, culmination, decline and disappearance, they are as systematically pre-arranged, and as wonderfully wrought out, as is the life-history of any existence, vegetable or animal, in its conception, embryo, infancy, puberty, adult, middle and declining age. There cannot be adduced a greater proof of inventive thought, or varied contrivance, perfect in itself, in all its parts and as a whole, than that exhibited in any one of these diseases.

What is thus true with regard to exanthems, is also true of other diseases to a greater extent than it might at first be imagined. It may yet be shown that a state of incubation belongs to all diseases. One can hardly doubt it in acute cases, much less in chronic—implied even in the term itself. How seldom is health found to have been perfect up to the very moment of apparent invasion in typhus, typhoid, or inflammatory affections! How often rather is it not observable that some unappreciated discomfort, or perhaps some exaltation of spirits is confessed to, when a thorough investigation is attempted! It is often found that the more obstinate and ordinarily fatal diseases include multifarious weakening disorders, endured by the victim some time before their true nature is fully realized. Be this as it may, after a disease has taken its occupancy it follows certain laws peculiar to itself, as the lengthened histories of the books amply testify. These, though written for an entirely different purpose, reveal, if we read aright, a remarkable conformity to the idea which we have thus tried to developé.

May not what we have shown of the simplest morbid affections be also true of the more complicated and less understood diseases, such as those of the blood, for instance, or of the nervous system, which the acutest observers have failed to explain ? We hear often of metastasis. An internal organ gives evidence of a severe attack. All at once the local symptoms abate, and a distant part, an extremity perhaps, is seized with exquisite tenderness and intolerable pain. Hardly does this subside before terrific agony affects the head, and the patient sinks in the frightful struggles of mania. Theory explains that in the internal organ first attacked, pus or such-like morbid matter was evolved ; that this, taken up by the adjacent veins, was carried to the extremity by the veins of that part ; and that when the last change occurred, it was effected in a similar way in the direction of the head. Post-mortem existence of pus in the several parts is considered proof positive of the truth of the hypothesis. Or else, that the pus taken up by the veins and carried to the heart, is forced through the arteries by that organ to the other parts subsequently affected. But how, in the first instance, can veins whose currents run in the same direction or towards a common centre, carry fluids or other matter in opposite directions ? Or, on the second supposition, can we imagine that pus can go unaltered through the whole circuit of the circulation without poisoning the whole system rather than a remote part ? Besides, the formation of the pus in the first instance is left unaccounted for. Is it not more rational to think that the original

morbific cause, after incubation sufficient to saturate the system, manifested itself, first, in the internal organ, next, in the extremity, and lastly, in the head; the outward demonstrations being only consecutive attendants on the one unexplained moving cause?

Acute rheumatism may also further illustrate our meaning. This disease, with one central, constitutional morbid cause, shows itself on the outposts in most astonishing ways — now at the end of one extremity, and in a moment, as it were, leaving that part to appear in a distant one diagonally opposite. When fixed upon any portion, no one can with any certainty hasten or retard its departure, say how long it will remain, or predict what will be its next point of attack. Each new case is a new enigma. How curiously planned, how varied in uniformity, how singularly wrought out! No finite intelligence could ever have originated such a combination; no human intellect ever approached it in subtilty of contrivance.

But instances need not be multiplied. There is hardly a disease which will not afford, if studied in this view, an example of wondrous designing power. All the resources of art would be unavailing in an attempt to originate one even of the simplest specific diseases. Great is the mystery that overhangs the nature of morbid causes. The highest intellects have proved incompetent to its solution. Volumes have been written to elucidate it, still the mystery remains as deeply sealed up as in the days of the earliest observers. But the inference is unavoidable, that if the human mind cannot unravel the mar-

vels of a disease with all its attendant and antecedent phenomena, and much less find its morbid cause, it must have required a higher intellect than any created to have combined these agents, and arranged the laws by which the whole are governed.

Not less worthy of notice are the different susceptibilities of different individuals to any single disease ; and of a single individual to different diseases. When the seeds of disease are scattered abroad, many fall into unprepared systems, and after springing up, quickly wither away ; not every acorn becomes an oak. Let a large number be simultaneously exposed to contagion : one portion would soon sink under its influence ; another would be severely affected ; still another, and perhaps the largest, would suffer moderately ; while a few, or many as the case might be, would pass unscathed, entirely unaffected by its presence. In a great number this susceptibility would be exhausted by one attack, so that the subjects could bear any amount of subsequent exposure with impunity. On the other hand, a few would receive the disease a second, and some even a third time. This difference of susceptibility obtains in regard to most if not all diseases, and to the protective power in many — how many is not yet fully ascertained. In other cases, however, one attack only predisposes to its repetition. In this respect, also, there seems to be a graduated scale, arranged with forethought and planned by intelligence. And all this is true no less of individuals than of classes.

Again, diseases are distributed through the different seasons of the year with such a degree of con-

stancy that the seasons themselves are sometimes spoken of as the causes of the diseases. But a little reflection will enable one to see that, in the nature of things, there is no essential or known reason why diseases of the bronchial mucous membrane should prevail in winter, or those of the intestinal mucous membrane in the summer ; why the plague should prefer heat, and variola cold for their devastations.

In like manner the appearance and peculiar characteristics of common diseases in ordinary seasons, or the severer cases of epidemics in all seasons, may never be satisfactorily accounted for by the external surroundings of the victims. After most careful investigations, writers are as yet compelled to admit that there must be some unknown condition, some cause not understood, other than the poverty, privations, filth and position of those attacked. The simple explanation is to be found in the idea of an original Plan, as we are attempting to demonstrate. With this as the guiding idea, how much more intelligible become such investigations of disease ; how much easier the unravelling of the laws which govern organized existence ; how much time saved, now lost in fruitless search for specific causes !

Other evidences of Design and fixed law may be noticed in the general averages of sickness and mortality. These are such and so constant that insurers can calculate with accuracy their probable losses from one decade to another, though their patrons are selected from the most vigorous and favored classes ; and any community can estimate,

if it chooses, its loss of time by sickness, so as to provide beforehand for the coming emergencies of future years.

The geographical distribution of the various animals and plants within certain limits, a discovery which has given additional interest to natural science in our day, is not more remarkable than the geographical distribution of diseases. While some seem to be almost cosmopolitan in their extent, others are confined to restricted localities, beyond which, without any apparent reason, they seem unwilling to go. As some plants thrive best in connection with others, or in near proximity, so there are diseases which seem to have a mutual affinity, or appear generally in connection with each other ; while, on the other hand, some unexplained antagonisms and complements exist among diseases not unlike those observed in the vegetable kingdom.

Furthermore, that power peculiar to organized beings, which enables them to endure, within wide limits, all kinds of physical changes and exhausting influences, is no less remarkable in the tolerance of diseases. This "reserved force" seems a preliminary necessity to the possibility of disease, or at least to recovery from it. Without this reserved force, ordinary functions would be in constant danger of interruption or absolute destruction. With it, the severest malady may pass through all its stages to perfect recovery, without, in the end, greatly injuring the individual. This will appear a more remarkable provision when we consider that during disease the ordinary supply of nourishment for the

development of force is declined by the patient, and often only so much is admitted as may be barely sufficient to continue existence. We do wrong to call this, or any phase of it, a *vis medicatrix* — a term (the sooner discarded the better) involving theories long since abandoned, and now almost forgotten. It is simply a vital principle of endurance, sustaining the organism through all the period of disease, as necessary at the outset as at the close.

Such are some of the evidences of forethought and design in the introduction of diseases. These evidences are to be seen in the fossil remains of animals which lived and suffered long before man appeared upon the earth. They are to be seen in the diseases of animals now existing — in the wild which avoid, and in the domestic which cling to the abodes of the human race. They are to be seen more universally, and more completely, developed in man himself, as, from the cradle to the grave, he passes through one experience to another by allotted stages. They are to be seen in the histories of separate diseases so systematically and mysteriously constructed; and in their geographical distribution, periodicity, modes of onset, and decline. Additional evidences are also to be seen in the different susceptibilities of individuals, and in the power of endurance possessed by all. From whatever point the subject is viewed, increasing evidences arise of intelligent and inventive authorship. On all sides these evidences are of the same kind as adduced to show Design in other operations of nature; and if admitted anywhere, we must admit its manifest revelation

in the devising and the orderly contrivance of diseases.*

Thus it appears that the idea of Diseases must have originated in the Creator's mind, and its development formed a part of the Plan of Creation from the beginning. The ultimate purpose of such a Plan is not for man to determine. Deliberately devised, diseases do not necessarily imply "gratuitous malevolence ;" for, despite of some philosophers, it is quite possible to conceive of "the earth and all that is therein," simply as an expression of Divine thought, without reference to the question of good and evil. But to repel such censure is foreign to our present purpose ; *whatever is*, is enough for us as scientific men now to consider, humbly acknowledging that "in the Divine government the matter of fact always determines the question of right, and that whatever has been done by Him, who rendereth no account to man of his matters, He had in all ages and in all places an unchallenged right to do."

Such being the facts, though it may never be explained why organized existence always has been, and until a new order of things has arisen always will be, subject to diseases, yet the extrication of

* *Nota Bene.* The limits of this Discourse admitted only of a restricted development of the argument from diseases in animals ; that from diseases in the vegetable kingdom, exhibited in every orchard and grove, is equally impressive and convincing.

For the same reason idiopathic diseases only (those "realities" manifested in "a series of consecutive changes") have been considered. Disorders (irregular or disturbed performance of function) afford equally good illustrations of plan, in the laws which govern them, and in the subsequent restoration from their effects.

what cannot be explained from what may, is no small addition to any science. Recognizing such limitations, we shall not, like the great men whom Hippocrates so ingeniously refuted (for there were great physicians before his time), labor to refer all the afflictions of the race "to hot, or cold, or wet, or dry;" nor to "figments called inflammations," which have been so quick to disappear under the tests of our own day; nor to any of the many other theories which in the interval have had their short-lived career. But we shall consider the causes of diseases as primitive purposes, as much so as electricity or gravitation, and proceeding as with those subjects, we shall study their development and the phenomena to which they give rise, with more satisfaction to ourselves and benefit to the sick, and with the positive enlargement of our science.

Since these things are so, it may perhaps be said that we may as well fold our hands, and resign ourselves with indifference to whatever fate may befall us. By no means. The storm may arise and the winds blow, but we may seek shelter from the former, or wrap our mantles closer to exclude the latter. Even against the inconveniences of a summer shower we may oppose the delicate contrivances of modern invention. But it does follow that we may not attempt to attack the laws of nature with any hope of arresting the fury of the elements, or the influence of their disturbances. We may indeed estimate their forces, calculate their movements, and, having possessed ourselves of all that is known of them, govern our conduct so as in many cases to avoid

them in the outset, or at least to mitigate the evils in their train, or to take advantage of whatever of good can be derived from their presence.

So with regard to diseases, we may not have it in our power to banish their elements from existence ; we may not often prevent their coming, nor be able to stay their progress ; we may not jugulate or break them up at pleasure when once they have seized upon us, nor greatly shorten their continuance ; we may not amend their destructive characters, nor very sensibly diminish average mortality ; — nevertheless, suitably recognizing their place in the great Plan of Creation, and acquiring as full knowledge as possible of their phenomena, with a just estimate of human power, we may seek, with some certainty of success, to evade their approach, or to save ourselves from many of the inconveniences and dangers of their attacks. Thus, when a disease “has obtained a foothold in the system,” we may remove as far as possible obstacles to the natural progress of its “succession of processes,” and sustain the system as well as may be in its power of endurance, until these processes are duly and safely completed. To do this to perfection, is no easy matter. It will require a greater knowledge of disease than any individual, however learned, has yet acquired ; a more thorough investigation of each separate case than is now made by the most pains-taking practitioner ; a more complete mastery and discriminating use of all the appliances of our art than heretofore possessed ; and a more absolute and abiding control of the patient and his surroundings than was ever yet

granted to any medical attendant. Possibly the Profession and the Public may hereafter be educated up to such a state of perfection in the management of the sick; though, as yet, even the profession seems not quite willing to fully accept all that is already known of the nature and laws of disease,

“The physician,” says the learned translator of Hippocrates, “who cannot inform his patient what would be the probable issue of his complaint, if allowed to follow its natural course, is not qualified to prescribe any rational plan for its cure.” But how small a proportion of the profession could consistently practise their calling for a single day, were this test strictly exacted! Who among us ever saw a disease allowed to follow its natural course to its termination, unless, bolder than his neighbors, he risked the denunciation of his peers and dared by himself to try the experiment? Yet the trial is not so dangerous as formerly believed; and if entered upon as unhesitatingly and with the same confident expectation that newly vaunted remedies are often given, more “wonderful cures” would be witnessed than were ever related in the books. The time is coming, perhaps it is nearer than we are aware, when the public shall no longer consider the proper care of the sick (their true *cure*) to consist in the mysterious and indispensable administration of drugs, but in rationally and understandingly attending to all their necessities; when the young aspirant for patronage shall not find it necessary, in order to satisfy the bystanders, to write his recipe before he has examined his patient, or to authoritatively an-

nounce the name of the disease before he has had time to comprehend the symptoms ; — and there is no reason why the profession should not now, by lofty endeavor and combined action, successfully strive to bring about such a desirable result. When this is accomplished, the not unreasonable requirement above quoted may then be fully accepted. At any rate, it is time that the education of pupils in the study of disease should be founded on a new basis. Not a school in Christendom ever yet afforded proper opportunities, if any at all, for studying the natural course of diseases. Under different teachers, if we may credit eminent authorities and our own observations, the same disease may assume different outward appearances, according as the several “ courses of treatment ” may differ from each other. While, too often, students are led to believe that all the recoveries they have seen have been due to the prescriptions selected for them ; and they go out into the world under the apprehension that if they do not generally “ cure ” disease, it will be from not having the good fortune to hit upon the right course of medication. The exhibition of a multifarious mixture, in order perchance to include the right ingredient, is not merely a fitting, but the most obvious corollary to their previous instruction. To most men, years of anxious and much unsatisfactory experience ; to some, a whole life of disappointment ending in utter scepticism of the value of medicine, are the results of such erroneous beginnings.

The doctrine we have advanced and advocated leads to a different procedure. It leads to an aban-

donment of the old notions of the primary causes of diseases. It leads to a new view of the purpose of diseases themselves. It shows the idea untenable that disease is an evil only to be expelled from the system by some antagonistic power, the *vis medicatrix*, for example ; or by a new and incompatible disease artificially induced ; or that it is in itself an effort (*conamen*) to expel from the body an enemy already in possession ; — but that it is one of the attendants of life, instituted in the Beginning. And, ignoring none of the real acquisitions of the past, this doctrine divests the truth of many of the errors which have thus far impeded its progress.

This doctrine being accepted, the proper acquisition of our art will demand of students, in the first place, a thorough knowledge of the body in its healthy condition — its organic structure, its outward form, and its internal functions ; and secondly, the investigation of the natural phenomena of disease *undisturbed by medication*, as a necessary preliminary to its proper management. It will require of them also a careful study of the operations of the mind as affecting the body, and their mutual reactions upon each other, in health as well as in disease — health and disease being parts of one great Plan, and often intricately involved in each other. In these directions medical education has been deficient, and subsequent attention in after-life remiss. Let coming students take warning from the deficiencies and failings of those who have preceded them. Let them thus, properly grounded, and not till then, proceed to study the effects of accepted

remedial agents. Every step from such a base will be a true progress for themselves and their science, no disappointment or scepticism ensuing. Every advance in this way will be in the right direction — *nulla vestigia retrorsum*.

Of late years it has been quite common to vaunt the power man may have over plants and animals in modifying their form, color, growth and other qualities, and to adduce this as an argument in favor of a similar power over diseases. But the two things are far from being analogous. It is one thing to raise a few deformed sheep, or to increase the number of vertebræ of birds from generation to generation, by so-called "selective breeding ;" and quite another thing to modify the course and termination of disease in a particular individual. They are separate matters, bound by no logical sequence. The one must necessarily be limited to the life of an individual, or only to the period of a disease in an individual ; the other may, nay, must extend through successive generations for successive ages. Besides, the permanency of species has not yet been disproved, and it will be time enough to use such arguments when dogs are actually bred from wolves, or an ape unquestionably transformed into a human being.

While admiring the activity in our schools, the facilities of instruction and of clinical observations at our hospitals, the zeal of societies, the energy of individuals, and all the various helps to professional advancement, now so multiplied and abundant, one cannot but regret the still prevalent tendency to recur

so readily to second causes, and to impede the advancement of medical science by claiming for it more than is consistent with actual truth. The medical press, so often boasted of as the great disseminator of medical knowledge, is still too often the vehicle of false philosophy and unworthy assumptions. False facts, false reasoning, and non-sequitur conclusions fill up a large portion of periodical publications. Even the more stately volume seems incomplete without its remarkable cases selected for an object, and its infallible formulæ, which perhaps have never had a trial. An author who shall candidly relate his own experience in ordinary cases, of expectations disappointed and unsuccessful issues following the employment of reputed infallible agents (and such cases only), would richly deserve, if he did not receive, the thanks of the profession, and be indeed "more than armies to the common weal."

BRETHREN :

Fashions in medication are fluctuating and fleeting. Each age flatters itself that it has made a great advance over the previous, and has reached at last something established and permanent. But we smile at the notions of our predecessors, only to be laughed at by those who come after us. Time was, men are living who remember it, when pneumonia was considered a fatal complaint, unless subdued by venesection at its onset ; now it is instanced as the purest example of a self-limited disease. Time was, physicians are with us who thus practised,

when spasmodic croup, so-called, was believed to be an imminently dangerous disease if the external jugular vein were not immediately opened ; now it is known to be a comparatively harmless accompaniment of another disorder, needing in itself no special interference. Time was, our own day embraces it, when it was publicly taught that mercury to salivation was not only the specific, or antidote, for iritis, but absolutely essential to its successful treatment ; now, one of our number has been justly called a public benefactor for showing that such practice is not only unnecessary, but often grievously detrimental in that affection. But why multiply examples ? So it has been, and so it will ever continue to be, until more correct views are acquired of the Plan of Creation, and of human powers under it. The great facts of our science are permanent, and, however feebly stated from time to time, or hesitatingly received, will at last prevail and triumph. False assumptions are dangerous expedients, which the most ignorant will ever be most likely to practise upon. Truth is weakened by any addition of error ; and the profession that allows it must in the end abandon its own self-respect. The remedy is in our own hands ; let us be heroic enough to apply it in season.

“ Medicine,” says our American Hippocrates, “ is the art of understanding diseases, and of curing or relieving them when possible.” To this sage remark it may be added that a Doctor of medicine should also teach the patient and the friends to acquiesce in an intelligent submission to the laws of disease ;

laws as manifest and inflexible as those of health. This done, the Profession will acquire a dignity before unknown to it ; and the Attendant will become an enlightened guide, instead of an uncertain and bewildering dealer out of nostrums.

To turn increasing attention in the direction indicated, we ventured on the perilous duty of to-day. Let us hope that as impediments are one by one removed, progress may be easier in time to come. There is nothing in time past to discourage renewed effort. Though yet afar off, the goal is nevertheless in sight. The present time is propitious. Allied sciences are on the move. It is for us to hasten on, and to display our standard in the foremost ranks. Thus shall we better satisfy the demands of the age, and truly ennoble our Profession.

BRETHREN,

During the past year, twenty-two of our number have yielded to the common fate of mortality. The Secretary's list, which he read to-day, has given us, name by name, the melancholy announcement. The courteous Bartlett, the munificent Walker, the genial and true-hearted Coale, the brave and tender-hearted Sargent, and our other martyrs, Fox, Heath and Hoyt, with other well-known and cherished friends, have gone to their rest. We strew the fresh-turned mound with cypress mingled with laurel, and kindly drop the tear of friendship, as, imitating their example, we press

earnestly forward to the struggles remaining before us. Faithfully and loyally they served the cause of humanity and of country; ardently would we recount their virtues, and forever hold them in honored remembrance.

NOTES.

PAGE 3, LINE 1.

Il faut toujours en revenir à cette triste vérité que la médecine est la plus noble des métiers. — *Gaz. Med. de Paris*, 1851, Tom. v. p. 448.

“Medicus sum, non vero formularum medicarum præscriptor; quas ego duas, sive *artes*, sive *dotes*, sive etiam *provincias*, appellare libeat, toto coelo a se invicem distare arbitror.” SYDENHAM, *Dist. Epist.*, §42.

Said an esteemed friend, as we left the hall last annual meeting, “So, you read next year; well, don’t give us any of your heresy”! The exordium of this Discourse was written that evening.

PAGE 4, LINE 30.

See a list of publications in “Expositions of Rational Medicine,” by Jacob Bigelow, M.D., Boston, 1858, pp. 57–60. Several other well-known papers have been published since that date.

PAGE 5, LINE 18.

“Upon his taking his place as lord of the terrestrial creations, a specific injunction was given, guarded by a penalty for its violation: ‘In the day thou eatest thereof thou shalt surely die.’ But having taken upon himself the fearful responsibility of casting off the authority of his rightful sovereign, he came to disregard all wholesome laws, whether outspoken from the cloud upon Sinai, or written upon the organism of his physical nature; hence the insane perversions in physiology and psychology, including the poisoning of the senses of taste and smell, those faithful guardians of life and health and beauty; and hence the thousand forms of disease that flesh is now heir to.”—*Health: its Friends and its Foes*, by R. D. MUSSEY, M.D., LL.D., Boston, 1862, pp. 190, 191.

“Hence the disorder and disease; hence the groaning and travailing together of the whole creation; it is all the supernatural work, the bad miracle of sin.” *Bushnell’s Nature and the Supernatural*, New York, 1861, p. 218.

“Medicines are created by our offended God to relieve diseases which all originate in sin.” *Scott’s Comm.*, Vol. Matt.—*John*, p. 650, Philadelphia, 1860.

Miss Nightingale, whose influence exceeds in effect a score of such writers, takes a diametrically opposite view of such matters. She speaks of diseases as "conditions, like a dirty and a clean condition, and just as much under our control, * * * conditions in which we have placed ourselves;" and seems to think that we can originate diseases at will. She says:

"I have seen with my eyes and smelt with my nose smallpox growing up in first specimens, either in close rooms, or in over-crowded wards, where it could not by any possibility have been 'caught,' but must have begun."

"Nay more, I have seen diseases begin, grow up, and pass into one another." *Notes on Nursing*, p. 26, note.

Disrespectful as it may seem, one can hardly repress the exclamation, "Oh, Gammer, what big eyes you've got!"

PAGE 6, LINE 7.

We quote the answer, for the benefit of those who may not remember it! "Jesus answered, Neither hath this man sinned, nor his parents; but that the works of God should be made manifest in him." JOHN ix. 3.

PAGE 6, LINE 16.

See Miller, "Testimony of the Rocks;" Buckland, "Reliquiæ Diluvianæ;" "Bridgewater Treatise;" Mantell, &c.

PAGE 6, LINE 22.

"Fossil sharks, with weapons so murderous, that they must have been, according to Agassiz, the pirates of that period." MILLER, "*Old Red Sandstone*," p. 215.

PAGE 6, LINE 27.

For description of the sting of the *Pleuracanthus*, offensive organs, and defensive armor of other animals, see "Testimony of the Rocks," pp. 99 *et seq.*

PAGE 7, LINES 6-12.

See Buckland's *Bridgewater Treatise*, pp. 187-201.

PAGE 7, LINE 13.

Buckland, *ib.* p. 190, note. "The quantity of this coprolite is prodigious, when compared with the size of the animal in which it occurs; and if we were not acquainted with the powers of the digestive organs of reptiles and fishes, and their capacity of gorging the larger animals that form their prey; the great space within these fossil skeletons of *Ichthyosauri*, which is occasionally filled with coprolitic matter, would appear inexplicable."

PAGE 7, LINE 23, to PAGE 8, LINE 4.

Mr. Clift's case, see Buckland, *Reliquiæ Diluvianæ*, p. 74. Cuvier, *Ossemens Fossiles*, Vol. iv. p. 396, and plate. See also Zies, "Beschreibung mehrerer kranker Knochen vorweltliche Thiere," Leipzig, 1856. A resumé, with additional descriptions of specimens in the Dresden Collections.

PAGE 9, LINE 1.

According to Dr. Livingston, "many diseases prevail among wild animals" in South Africa. *Researches*, p. 149.

See *Recherches de Pathologie Comparée*, par Ch. F. Heusinger. Cassel, 1848.

PAGE 9, LINE 17.

Hugh Miller, Old Red Sandstone, p. 222; which see also for several noted instances of epidemics.

See "Traité d'Hygiène Agricole, par F. A. Ruffer. 8vo., Friburg, 1858.

See also a valuable work, "Die Einimpfung der Lungenseuche des Kindviches," &c. J. M. KREUTZER, 8vo., Erlangen, 1854.

PAGE 9, LINE 24.

"Spemque, gregemque simul, cunctamque ab origine gentem."

Georgic iii., l. 473.

PAGE 9, LINE 27.

"At length she strikes a universal blow;
To death at once whole herds of cattle go."

Dryden's Georgics, iii., lines 827-8.

PAGE 9, LINE 32.

Sir James Forbes, M.D., "Nature and Art in the Cure of Disease," p. 46.

PAGE 11, LINE 6.

Sir Henry Holland, M.D., "Medical Notes and Reflections," Chap. xxvi. T. Thompson, *Annals of Influenza*, p. 385; and others.

PAGE 11, LINE 26.

"It is a fact that the Asiatic cholera twice spared the poor Jews, in 'The Ghetto,' who live most crowded, filthily, and with bad nourishment." *Letter from Dr. VALERI, of Rome*.

Instances abound in all authors on the subject.

PAGE 12, LINE 27.

Marshall Hall, "Theory and Practice." Article, *Measles*.

PAGE 13, LINE 14.

"The poison which generates cholera" "certainly possesses in an extraordinary degree the properties which all other morbid poisons possess in some degree, of lying latent for a length of time, in certain localities, or in the constitutions of individuals, or both," &c. *Cyclop. Pract. Med.*, Vol. iii. p. 25.

PAGE 14, LINE 12.

This case occurred while writing this part of the Discourse. The explanation given is that of the eminent gentleman in attendance. Copeland says of another case of Metastasis, "The transfer was instantaneous," * * * "the medium being evidently the nervous system." *Dict. Prac. Med.*, Article *Disease*, §173A.

PAGE 17, LINE 16.

Cyclopedia Pract. Med., Vol. iii. pp. 251 *et seq.*

PAGE 17, LINE 29.

So stated to me by agents of known ability. See also Reports to Legislature, on Insurance, &c.

Memorial, Boston Sanitary Association, pp. 9 *et seq.*, Boston, 1861.

PAGE 18, LINE 4.

First sketched out in its great outlines by Humboldt, and most fully demonstrated for the class of mollusks in their distribution along our coast by our President, Dr. A. A. Gould, in 1840. See *Invertebrata of Massachusetts*, p. 315. Also *Proceedings of Boston Nat. Hist. Soc.*, Vol. iii. p. 483. U. S. Exploring Expedition, *Mollusca*, pp. 9 *et seq.*

PAGE 18, LINE 8.

"On peut donc dire avec une parfaite exactitude, des maladies, considérées au point de vue géographique, comme des végétaux, qu'elles ont leurs *habitats*, leurs stations, leurs limites, sous le triple rapport de la latitude, de l'altitude et même de la longitude géographique."—BOUDIN, *Traité de Géographie et de Statistique Médicale*, Paris, 1857, Vol. ii. p. 227.

PAGE 18, LINE 18.

Cretinism denotes Goitre in the same country. In central Europe, typhoid fever accompanies phthisis.—BOUDIN.

Intermittent fever and phthisis are not usually prevalent in the same locality.

Wherever Calopogon is met with, one may expect to find *Arethusa* in close proximity.

The thistle is destructive to oats; erigeron, to wheat; scabious, to flax.

In the United States, some diseases (phthisis, *e. g.*) diminish from the North to the South, while others (abdominal fevers) increase in the same direction. — DR. A. A. GOULD, *resumé U. S. Census*, 1860, in Mass. Registration Report, 1861, 53, and 1862, p. 48.

PAGE 20, LINE 5.

Dr. Brown thus quaintly states a popular belief: "A brisk fever clarifies the entire man * * * it is like cleaning a chimney by setting it on fire; it is perilous, but thorough." — *Spare Hours*, p. 206.

Said El Hadgi the Fakir, quite as sensibly, "Welcome the disease, if it bring thee acquainted with a wise physician. For saith the poet, 'It is well to have fallen to the earth, if while grovelling there thou shalt discover a diamond.'" — *Chronicles of the Canongate*, Vol. ii. p. 139.

PAGE 20, LINE 20.

Hugh Miller, Testimony of the Rocks, p. 104.

PAGE 21, LINE 4.

Hippocrates, *Ancient Medicine*, §15, Ed. Sydenham Soc.

"Argument" by Dr. Adams, *ib.* p. 158.

PAGE 22, LINE 11.

"La proportion des décès est loin d'avoir diminué avec l'accroissement du nombre des médecins." — BOUDIN, Vol. ii. p. 84.

PAGE 22, LINE 17.

"Dit M. Quetelet, 'L'art de guérir exerce peu d'influence sur le nombre des décès, mais il en a beaucoup pour améliorer phisiquement le peuple. Il diminue la somme des douleurs,' &c.'" — *ib.* p. 86.

PAGE 23, LINE 1.

Any one who may fear that his occupation will be gone, should he admit the possibility of treating disease without drugs, will find the daily routine of a Rational Physician well set forth in the following extract:

"The medical man will find ample scope for the exercise of his faculties, even in cases where special drugging may not be requisite. Close attention, acute observation, and the expenditure of not a little time, will be indispensable on his part, in order to effectually act upon modified health — laws in regard to rest, the many nice points connected with diet, the hygrometric condition, temperature, and free circulation of the air, change of air, clothing, cleanliness, &c. His attention must also be directed to exciting or aggravating causes of disease in the locality, the residence, the room, or the person of the patient. He will, moreover,

have to take care that the mind of the sufferer is kept in as tranquil a condition as circumstances will admit of," &c. — *Rational Medicine; The Hunterian Oration for 1860*, by S. H. WARD, M.D., &c., p. 48.

PAGE 23, LINE 6.

"If what is really *known* of the laws of disease were told to the members of the profession, more than half of them would indignantly discredit it," said an eminent pathologist to the writer a few months since.

PAGE 23, LINE 7.

Dr. Francis Adams, LL.D., *Life of Hippocrates*, p. 18. *Ed. Sydenham Soc.*

PAGE 23, LINE 18.

For "baneful effects" of trusting to nature, see Cullen's preface to his *Practice of Physic*.

PAGE 23, LINE 26.

"He who gives the least medicine, and that of the least offensive kind, is coming to be regarded as the best physician. It is, by the intelligent head of a family, held no impeachment of a physician's skill that he leaves no recipe, and directs measures so simple as to reflect no mystery on his craft." — *Boston Post (newspaper)*, July, 1864.

PAGE 23, LINE 31.

Baglivi, Hippocrates *Romanus* ab Aliberto vocatus, ait: "In curatione morborum, qui moram aliquam admittunt hoc ordine progredior. Prima die totus sum in examinando, &c. * * * Secunda die diligentius consideratis rebus antedictis, morbi speciem tandem decerno, et exinde remedia opportuna præscribere incipio." — *Prax. Med.*, p. 110.

PAGE 24, LINE 10.

Possibly there is an exception in Russia. "Dr. Hawrowitz, Physician to Prince Constantine, told me," said Dr. Roeser, Physician to the late King Otho, to the writer, "that the mortality in the hospital of the old Russians at Moskowa — who consider by their faith disease as a punishment by God, and the application of medicines for that reason a sin — is not greater, if not less, than in other hospitals. They apply only cleanliness and good nourishment." — *MS. Notes of a Visit to Athens, Greece*, 1860.

The result thus stated agrees with our own experience. In the epidemics of 1847-8, we took care of over three hundred cases of typhus fever without administering drugs. The cases were taken indiscriminately, including those in a dying state when first seen. The result was thirty-one deaths in three hundred and seven cases. In an epidemic

of scarlet fever in 1848-9, out of eighty-one cases so cared for, seventy-seven recovered. With every attention to the comfort of the sick and as thorough nursing as possible, the progress of the disease was as tolerable, its continuance as short as, and dangerous sequelæ less frequent than in other cases more "actively treated." In 1849, of forty cases of measles, thirty-nine recovered. The writer sometimes takes care of the more painful diseases, rheumatism for instance, without drugs. It requires greater patience and painstaking on the part of the practitioner, but the result is satisfactory. "I had not time," said a prominent physician the other day in the writer's hearing, "to persuade the family that the patient did not need any medicine, so I wrote a prescription and departed."

PAGE 24, LINE 16.

"Nam sæpe accidit ut facies morbi variet pro vario medicandi processu, ac nonnulla symptomata non tam morbo, quam medico debentur." SYDENHAM, *Observ. Med.*, §10.

Baglivi and others have similar expressions.

"The constant interference of art, in the form of medical treatment, with the normal processes of disease, has not only had the frequent effect of distorting them in reality, but, even when it failed to do so, has created the belief that *it did so*; leading in either case to an inference equally wrong—the false picture, in the one instance, being supposed to be true; the true picture, in the other, being supposed to be false."—Sir J. FORBES, *Nature*, &c. p. 6.

PAGE 25, LINES 5-8.

"'Vis medicatrix naturæ' is a favorite professional expression, a time-hallowed portion of medical phraseology. * * * Is there indeed, among other wonders of our corporeal being, a subtle force, inherent in the very organization itself, whose office it is to protect vitality, in its very arcana—to correct errors of function, and restore lesions of structure? So our accepted phraseology implies."—*Address before the Kentucky State Med. Society*, by J. B. FLINT, M.D., Pres't Soc., 1859, pp. 8-9.

"The conversion of the original disease into another is occasionally salutary." * * * "It is a very common object of art to produce this kind of conversion."—*Pract. Principles of Medicine*, by J. CONOLLY—*Cyclop. Pr. Med.*, Vol. iii. p. 272.

"Dicitur Ratio (si quid ego hic judico), Morbum, quantumlibet ejus causæ humano corpori adversentur, nihil esse aliud quam Naturæ conamen, materiæ morbificæ exterminationem in ægri salutem omni spe molientis."—SYDENHAM, *Observationes Med.*, §1. Quis circulus in probando!

"Helmetius, et parum ab eo discedens Campanella crediderunt febrem non esse morbum, sed morbi remedium, * * * ut peccantem materiem humoribus confusam eliminaret."—BAGLIVI, *Prax. Med.*, p. 72.

PAGE 25, LINE 17.

As one illustration of the little estimation in which even now such matters are held, it may be stated that, winter before last, of a class of more than two hundred students invited by the writer to attend a free course of lessons in Art-Anatomy by a competent teacher, with living models, less than twenty-five ever made their appearance, and only three or four continued through the course. One of these last has since had abundant reason to congratulate himself for his attention to these teachings.

PAGE 25, LINE 30.

"It may now be affirmed that the practitioners of the present day are, speaking generally, almost as uninformed in this particular [the natural course and event of diseases] as were their predecessors fifty or a hundred years back."—Sir J. FORBES, *Nature and Art*, &c., p. 5.

PAGE 26, LINE 14.

See "Origin of Species," by T. H. Huxley, F.R.S., 1863, pp. 94-100.

PAGE 27, LINE 12.

"I remember to have been shown a manuscript copy of a New Practice of Physic, wherein the first article that caught my eye was on the scrofulous distemper, towards the end of which I perceived the word CURE in capital letters, followed by a number of recipes, which I immediately perused with the greatest eagerness, and then asked the author if he had known many instances of cures performed by those prescriptions. 'I never knew one in my life,' replied he; 'but of what service would it be to describe a disease, if after the description I did not add the cure?'"—*Med. Sketches*, by J. MOORE, M.D., Lond., 1786, p. 64.

PAGE 27, LINE 16.

It is not improbable that such a work from a fully competent hand may be given to the Profession before many years.

PAGE 27, LINE 29.

Mass. Medical Society Communications, 1863, p. 260.

PAGE 28, LINE 11.

See "Practical Guide to the Study of the Diseases of the Eye," by Henry W. Williams, M.D., Boston, 1862, pp. 126-30.

PAGE 28, LINE 21.

"Un signe infaillible qu'une science n'est pas constituée c'est quand elle est encore une sorte de propriété commune. Mon portier n'hésitera pas à définir la maladie, à indiquer la cause, à prescrire le remède, et à

prédire l'issue. Il s'en croit le droit ; et il parait l'avoir, car on n'hésitera pas davantage à écouter son avis et souvent à le suivre."—*La Médecine et Les Médecins*, Paris, 1857, Vol. i. chap. i.

PAGE 28, LINE 27.

See "Rational Medicine," by Jacob Bigelow, M.D., p. 29.

PAGE 28, LINE 31.

"Even a moderate amount of knowledge of the general nature of diseases, and of the mode of operation and powers of the medical art, will make a man a better patient ; make him more content with the treatment prescribed, be it energetic or inert ; and make him repose greater confidence in his physician."—Sir J. FORBES, *Nature and Art*, p. 14.



